

## THE GENUS *KOHAUTIA* CHAM. ET SCHLECHT. (RUBIACEAE) IN AUSTRALIA

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### Summary

The first authentic record of the genus *Kohautia* Cham. et Schlecht. in Australia is made, with *K. australiensis*, the only Australian representative, described as new. Notes on distribution, habitat and conservation status of this species are given.

### Introduction

The genus *Kohautia* Cham. et Schlecht. has approximately 60 species occurring throughout the old world tropics (Mabberley, 1989). Differing opinions on the distinctiveness of *Kohautia* have had it included in *Oldenlandia* in the sense of Hooker (1882) or *Hedyotis* in the sense of Wight and Arnott (1834). The revision of the African species of *Oldenlandia* L. by Bremekamp (1952) revealed that *Kohautia* can be distinguished from *Oldenlandia* by its monomorphic short-styled flowers. The corolla is hypocrateriform with the style and stigmata inserted in the lower part of the tube below the anthers which are included in the wider upper part of the corolla tube. The pollen grains of the genus also differ in structure and size from those of *Oldenlandia* and allied African genera. Lewis (1965) carried out an extensive cytopalynological study of the African Hedyotideae and concluded that *Kohautia* was distinct and should not be included in *Oldenlandia* or *Hedyotis*.

The genus has been recorded previously in Australia by Verdcourt (1976), but this appears to be an error which arose from misreading Bremekamp's (1952) distributional information (pers. comm. Dr. B. Verdcourt via Australian Botanical Liaison Officer (Dr. T. Macfarlane)). In the course of investigations into the Australian Hedyotideae for the Flora of Australia it became apparent that the taxon here described was quite distinct from the other Australian Hedyotideae and belonged in *Kohautia*.

All measurements have been taken from dried or reconstituted material.

### Taxonomy

***Kohautia* Cham. et Schlecht., Linnaea 4: 156 (1829). Type: *Kohautia senegalensis* Cham. et Schlecht.**

Annual or perennial erect herbs rarely subshrubs. Leaves sessile, opposite or whorled. Stipules interpetiolar, adnate at the leaf-base, forming short sheath produced into single lobe or with 1-several fimbriae. Inflorescences of terminal or rarely axillary, lax, paniculiform or corymbiform cymes. Flowers 4-merous (rarely 5-merous), never heterostylous. Calyx lobes small, subulate to ovate-triangular or triangular, persistent. Corolla hypocrateriform; tube narrowly cylindrical, distinctly wider distally, throat glabrous or pilose; lobes valvate. Stamens entirely included in the upper widened part of corolla tube or rarely the anther-tips exerted. Style always included; stigma undivided, cylindrical or bifid; lobes filiform, erect; stigmata usually well below base of anthers or reaching the lower part of anthers. Ovary 2-locular; ovules numerous, immersed in fleshy placenta; placenta obloid attached peltately by short stalk to centre of septum. Capsule crustaceous, globose, ellipsoid or obloid, sometimes furrowed along dissepiment, beaked but not prominently so, loculicidally splitting between persistent calyx lobes. Seeds numerous, mostly not becoming viscid when moistened.

**Distribution:** The genus is distributed throughout Africa, India and Australia.

***Kohautia australiensis* Halford sp. nov.** quoad inflorescentias capsulasque *K. coccineae* Royle proxima, autem facile distinguenda corolla pallide caerulea, corollae tubo lobisque brevioribus (illo 2.5-4.5 mm longo vice 4.0-5.7 mm longo, his 0.5-1.0 mm longis vice 1.5-3.8 mm longis) calycis lobis triangularibus brevioribus (0.5-1.0 mm longis vice 1.8-5.2 mm longis). **Typus:** Western Australia. MUELLER

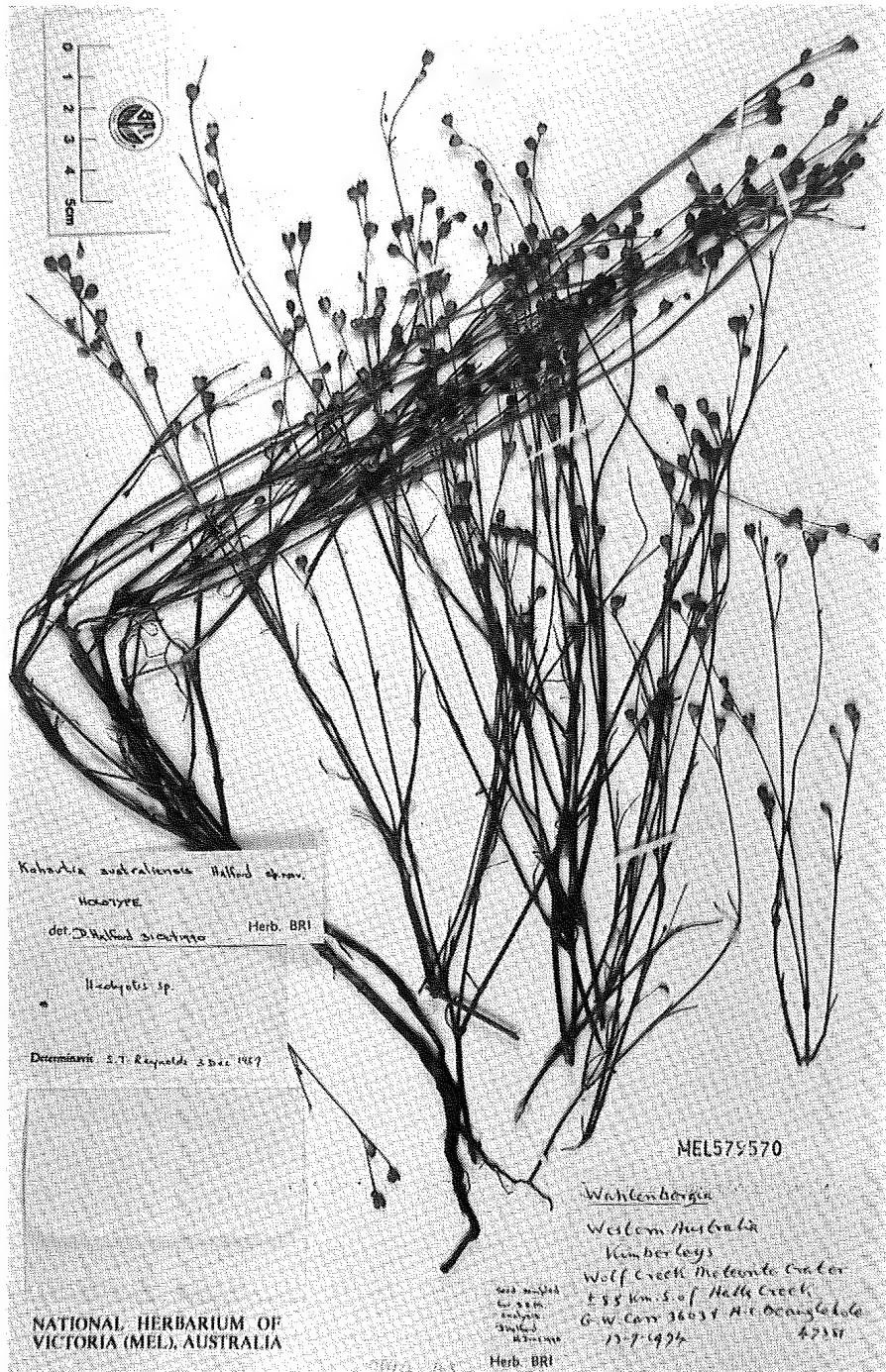


Fig. 1. Holotype of *Kohautia australiensis* Halford (Carr 3603 & Beauglehole 47381) at MEL.

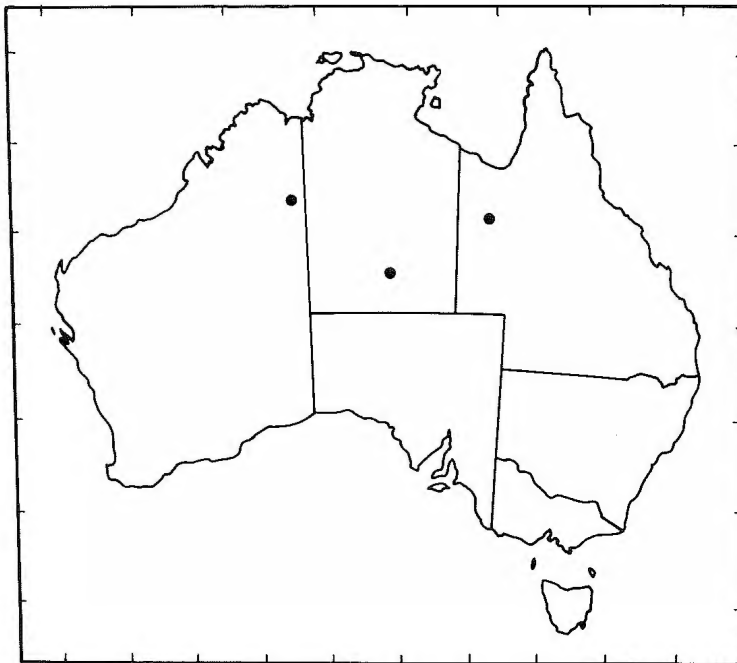
DISTRICT: Wolf Creek Meteorite Crater, July 1974, Carr 3603 & Beauglehole 47381 (holo: MEL).

Erect sparsely or much-branched annual herb 10–50 cm tall. Branchlets terete, papillose towards base. Leaves sessile, linear, 15–40 mm long, 0.5–1 mm wide, glabrous; margin recurved or revolute; midvein prominent below. Stipule-sheath 1–1.5 mm long, produced into a single lobe sometimes bifid at apex, 1–2 mm long; margin sometimes fimbriate. Inflorescence a lax, terminal cyme, monochasially branched or sometimes dichasially at the base. Flowers solitary, or paired at nodes on pedicels of unequal length; pedicels 0.5–1.5 mm long. Calyx lobes triangular, 0.6–1 mm long, glabrous; margin entire; colleters present in sinus between lobes. Corolla pale blue, hypocrateriform; tube 2.5–4.5 mm long, glabrous inside; lobes linear, 1–1.5 mm long, spreading, acute at apex. Anthers linear-oblong, 0.8–1 mm long, subsessile, basifixed or nearly so. Ovary ellipsoid, 1–1.3 mm long, papillate. Style slender 1.5–2.6 mm long; stigma bifid; lobes filiform, erect, 0.7–1.2 mm long, reaching base of anthers. Ovules c. 40 per locule. Capsule crustaceous, obloid-subglobose, 3.5–5 mm long, 3–4 mm wide, glabrous or sparsely papillate, slightly compressed, furrowed along dissepiment with persistent calyx lobes distant; beak 0.5–1 mm long, truncate. Seeds angular, obconic, numerous, c. 0.6 mm long; testa light brown.

**Additional specimens examined:** Northern Territory. CENTRAL SOUTHERN REGION: Ellery Gorge National Park, 23°47'S, 133°04'E, May 1984, Latz 9876 (AD,DNA). Queensland. BURKE DISTRICT: 14 km SSE of Mt Isa, 20°50'S, 139°37'E, Jun 1983, Schmid 636 (BRI).

**Distribution and habitat:** This species is known from only three disjunct localities in Western Australia (19°10'S, 127°48'E), Northern Territory (23°47'S, 133°04'E) and Queensland (20°50'S, 139°37'E) (Map 1). It has been noted growing on 'alluvial soils near creek' (Schmid 636) and on 'gravelly soil with *Triodia* on limestone foothill' (Latz 9876). The Northern Territory material was collected in an area of regrowth after fire (pers. comm. P.K. Latz).

**Relationships:** *K. australiensis* resembles *K. coccinea* Royle in inflorescence and capsule shape but can be distinguished from that species by having a pale blue corolla, shorter corolla tube (2.5–4.5 mm long compared to 4.0–5.7 mm long) and lobes (1.0–1.5 mm long compared to 1.5–3.8 mm long), and shorter, triangular calyx lobes (0.5–1.0 mm long compared to 1.8–5.2 mm long).



Map 1. Distribution of *Kohautia australiensis*.

**Conservation status:** Two of the three populations are within conservation reserves. A conservation coding of 3RC is appropriate based on criteria of Briggs and Leigh (1988).

**Etymology:** The specific epithet refers to Australia as this is the first authentic record of this genus from the continent.

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